

Comments Submitted in Strong Opposition to Contemplated "Small Cell Facility Installations" in Gaithersburg, MD

April 8, 2016

FROM: Ronald M. Powell, Ph.D. (Applied Physics)

Dear Sir or Madam,

I have just read about the contemplated "Small Cell Facility Installations" in Gaithersburg, MD.

<http://www.gaithersburgmd.gov/news/press-releases/2016/03/20160330-public-input-sought-on-small-cell-facility-installations>

Rather than rushing to comply with forthcoming requests for such installations, **please rush to resist such installations by all means possible**. Do not be intimidated by the Telecommunications Act of 1996. Rather, activate your legal people to scrutinize that Act for all possible grounds on which you can resist, as other communities in the USA have done.

The reason for resisting additional cell towers, whether "small cell" or otherwise, is that they emit electromagnetic fields (specifically microwave radiation) that is harmful to human health. Below is key evidence of that harm. Also, as public awareness continues to grow about the harmful health effects of the radiation from cell towers, the property values around the new "small cell" towers will inevitably decline because no one will want to live near them, or even walk past them, where the radiation will be strongest.

International Agency for Cancer Research (IARC) of the World Health Organization (WHO)

The World Health Organization (through its International Agency for Research on Cancer), in 2011, classified electromagnetic fields, including those used for cellular communications, as a Class 2B carcinogen (a possible carcinogen). That class of carcinogens includes hundreds of toxic substances like lead, chlordane, and nitrobenzene. Do we really want small cell towers spewing out radiation in the same class as these other toxins right into our community? Do we want our children walking past them, or standing next to them?

http://www.iarc.fr/en/media-centre/pr/2011/pdfs/pr208_E.pdf

Since 2011, the research supporting a higher risk classification for electromagnetic fields -- Class 2A (probable carcinogen) or even Class 1 (known carcinogen) -- has continued to build.

International Appeal Signed by the World's Leading Scientists on the Health Effects of Electromagnetic Fields

The warning of the world's leading scientists conducting research on the biological effects of the radiation from wireless devices was recently made very explicit. As of February 10, 2016, 220 scientists from 42 countries have signed an international appeal to the United Nations and to the World Health Organization.

<https://www.emfscientist.org/index.php/emf-scientist-appeal>

That appeal was first introduced in May 2015 and continues to gain support. These scientists seek improved protection of the public from harm from the radiation produced by many wireless sources, including explicitly “cellular and cordless phones and their base stations” among others. Together, these scientists have published over 2000 peer-reviewed research papers on this subject. They state the following:

“Numerous recent scientific publications have shown that EMF [electromagnetic fields] affects living organisms at levels well below most international and national guidelines. Effects include increased cancer risk, cellular stress, increase in harmful free radicals, genetic damages, structural and functional changes of the reproductive system, learning and memory deficits, neurological disorders, and negative impacts on general well-being in humans. Damage goes well beyond the human race, as there is growing evidence of harmful effects to both plant and animal life.”

The American Academy for Environmental Medicine

The American Academy of Environmental Medicine (AAEM), which trains physicians in preparation for Board Certification in Environmental Medicine, states: “The AAEM strongly supports the use of wired Internet connections, and encourages avoidance of radiofrequency such as from WiFi, cellular and mobile phones and towers, and ‘smart meters’.” AAEM further states that “The peer reviewed, scientific literature demonstrates the correlation between RF [radiofrequency] exposure and neurological, cardiac, and pulmonary disease as well as reproductive and developmental disorders, immune dysfunction, cancer and other health conditions. The evidence is irrefutable.”

AAEM, Wireless Radiofrequency Radiation in Schools, November 14, 2013
<http://www.aemonline.org/pdf/WiredSchools.pdf>

The American Academy of Pediatrics

The American Academy of Pediatrics (AAP), whose 60,000 doctors care for our children, supports the development of more restrictive standards for radiofrequency radiation exposure that would better protect the public, particularly the children. The AAP, in a letter to the Federal Communications Commission (FCC) and the Food and Drug Administration (FDA), dated August 29, 2013, states that “Children are not little adults and are disproportionately impacted by all environmental exposures, including cell phone radiation. Current FCC standards do not account for the unique vulnerability and use patterns specific to pregnant women and children. It is essential that any new standard for cell phones or other wireless devices be based on protecting the youngest and most vulnerable populations to ensure they are safeguarded throughout their lifetimes.”

<http://apps.fcc.gov/ecfs/document/view?id=7520941318>

Exposure Limits of the Federal Communications Commission Do NOT Protect Against All Health Effects

The exposure limits of the FCC are designed to protect against “thermal” effects of electromagnetic fields, not all biological effects (or non-thermal effects). That is, they protect only against being heated too much by the radiation. Those exposure limits (called the Maximum Permissible Exposure Limits), were developed in 1986, more than 30 years ago, and have not been significantly changed since. Back then, nearly all of the wireless devices that we used today were not even developed. Since then the international biomedical community has published thousands of studies that have added to our knowledge about the biological effects of exposure to

electromagnetic fields. At this point, we know more than enough to take precautionary action against increasing the exposure of the public to such harmful radiation. Here is what other agencies have said about the outdated exposure limits of the Federal Communications Commission.

U.S. Environmental Protection Agency

The limitations of the thermal exposure limits of the FCC, the IEEE, and the ICNIRP, were described by the Environmental Protection Agency (EPA) in 2002 as follows:

“The FCC’s current exposure guidelines, as well as those of the Institute of Electrical and Electronics Engineers (IEEE) and the International Commission on Non-ionizing Radiation Protection [ICNIRP], are thermally based, and do not apply to chronic, nonthermal exposure situations.... The FCC’s exposure guideline is considered protective of effects arising from a thermal mechanism but not from all possible mechanisms. Therefore, the generalization by many that the guidelines protect human beings from harm by any or all mechanisms is not justified.”

“Federal health and safety agencies have not yet developed policies concerning possible risk from long term, nonthermal exposures. When developing exposure standards for other physical agents such as toxic substances, health risk uncertainties, with emphasis given to sensitive populations, are often considered. Incorporating information on exposure scenarios involving repeated short duration/nonthermal exposures that may continue over very long periods of time (years), with an exposed population that includes children, the elderly, and people with various debilitating physical and medical conditions, could be beneficial in delineating appropriate protective exposure guidelines.”

So, the EPA explains above the following: (1) the FCC thermal exposure guidelines do NOT protect against all harm, only the harm caused by too much heating; (2) the FCC thermal exposure guidelines do not apply to “chronic, nonthermal exposure”, which is the type of exposure generated by cell towers; and (3) when new FCC guidelines are developed for chronic nonthermal exposures, they must accommodate “children”, among other high risk groups because those groups are not accommodated now.

Letter from Frank Marcinowski, Director, Radiation Protection Division, EPA, and Norbert Hankin, Center for Science and Risk Assessment, Radiation Protection Division, EPA, to Janet Newton, President, the EMR Network, with copies to the FCC and the IEEE, and dated July 16, 2002.

http://www.emrpolicy.org/litigation/case_law/docs/noi_epa_response.pdf

U.S. Department of the Interior

The limitations of the FCC thermal exposure guidelines were described in a totally different way by the U.S. Department of the Interior (Fish and Wildlife Service) in 2014. The Interior Department was motivated principally by multiple adverse effects of radiation on the health, and the life, of birds, particularly in connection with cell towers.

“However, the electromagnetic radiation standards used by the Federal Communications Commission (FCC) continue to be based on thermal heating, a criterion now nearly 30 years out of date and inapplicable today.”

CONCLUSION

Please fight against the installation of any further cell towers in Gaithersburg, small or large. They degrade our environment by increasing the risk to health of everyone who lives in our community. And once you sign contracts to accept them, and then discover what a disastrous mistake you have made, you will not be able to get rid of them without a very expensive battle. It is better and less expensive to do your fighting up front, by opposing them!

Do not be bribed into accepting the cell towers by payments you may be provided by those marketing these cell towers. They are a Faustian bargain, where you trade invaluable human health and happiness of your community for a comparative pittance.

Who am I?

I am a retired U.S. Government scientist (Ph.D., Applied Physics, Harvard University, 1975). During my Government career, I worked for the Executive Office of the President, the National Science Foundation, and the National Institute of Standards and Technology right here in Gaithersburg. For those organizations, respectively, I addressed Federal research and development program evaluation, energy policy research, and measurement development in support of the electronics and electrical-equipment industries and the biomedical research community. I currently interact with other scientists and with physicians around the world on the impact of the environment – including the radiofrequency/microwave environment – on human health.

I have been a resident of the Montgomery Village/Gaithersburg area since 1977.

Regards,

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